



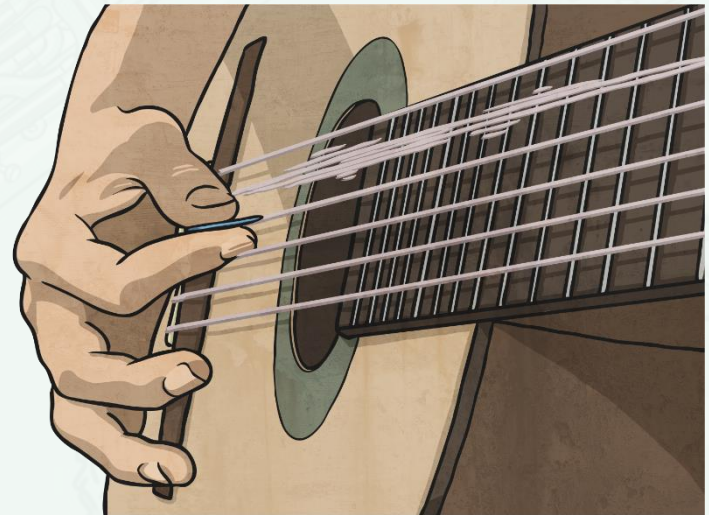
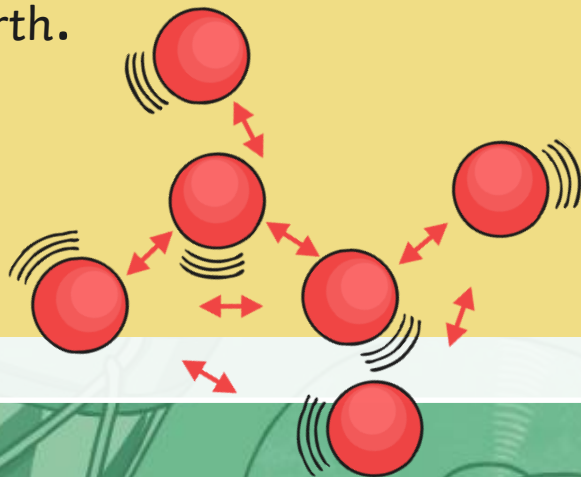
# How Sound is Made

# How Sound is Made

- Like light, sound travels through the air in waves.
- Sound is made by air molecules vibrating.
- When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.

## Meaning

Vibrating – shake quickly back and forth.

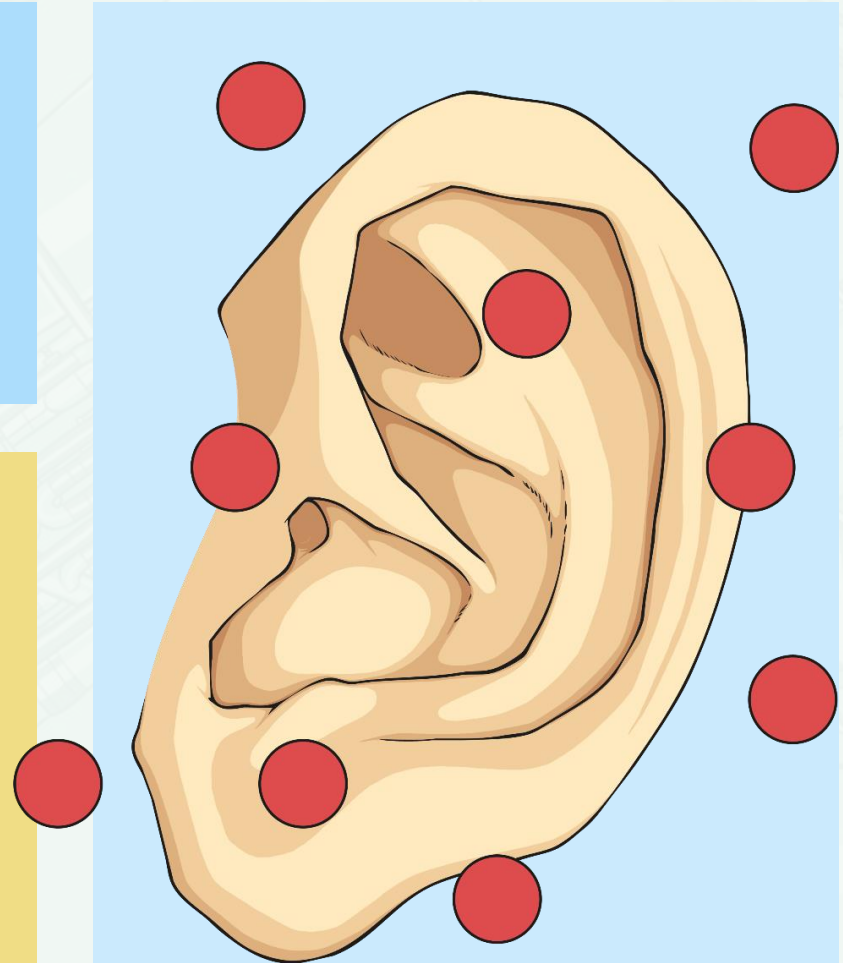


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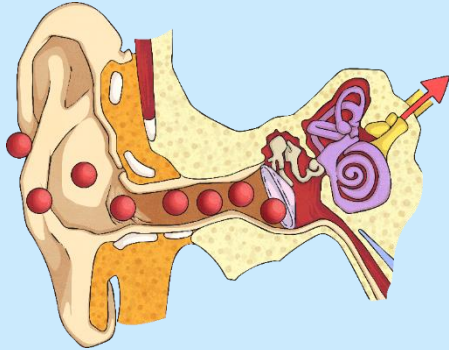
The vibration of the air molecules around the hands, shake the molecules next to them and so on, until the air molecules in the ear are vibrating.

Have you ever felt a speaker when the sound is on?

**It vibrates**



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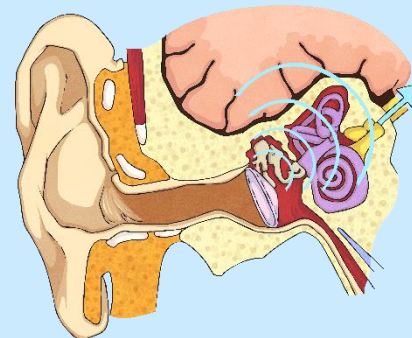
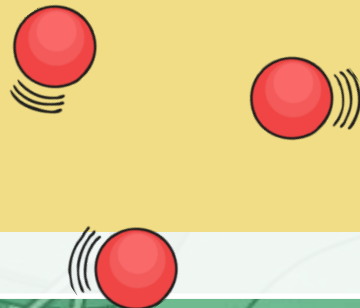


Molecules Vibrating

When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears.

The hairs are connected to nerves under the skin.

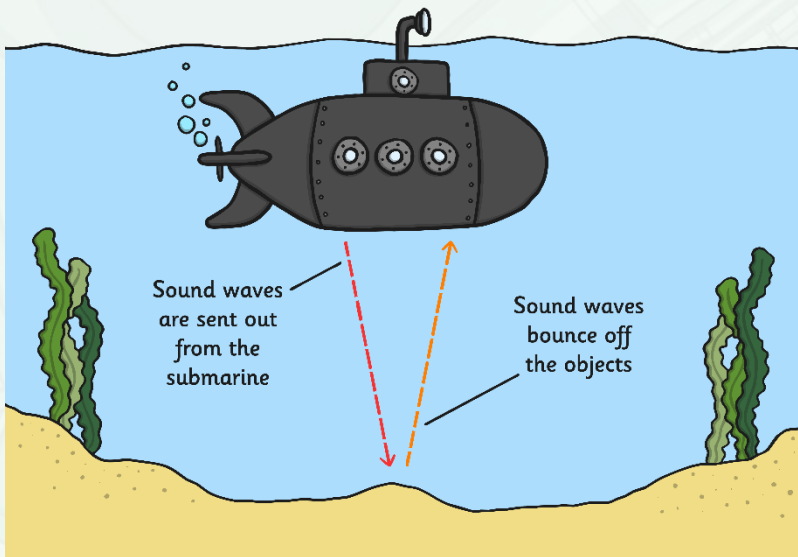
These nerves send messages to your brain to tell you that you heard a noise.



Communicating with the brain

# How Sound is Made

- Sound needs molecules to move. It is impossible for sound to travel in space.
- Sound doesn't have to move through air. It can travel through water or metal.
- In fact, sound travels faster through water and solids than it does through air.



# How Sound is Made

Sound travels much slower than light, whether in air or in water.

**Light travels at 186,000 miles per second.**  
**Sound travels at 770 miles per hour.**

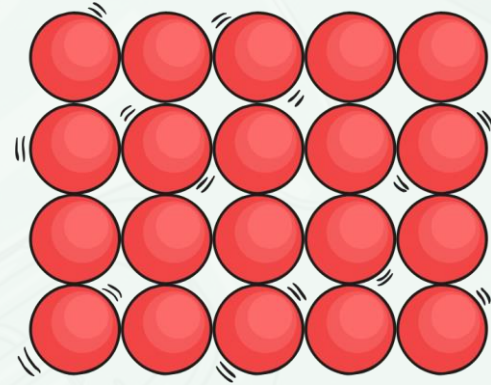
You often hear things after you see them, for example you see the lightning before you hear the thunder.



# How Sound is Made

Why do you think sound travels faster through solids and liquids, than gases?

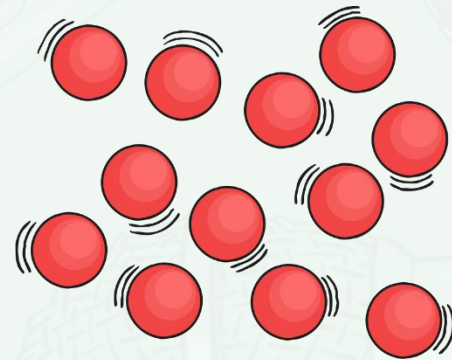
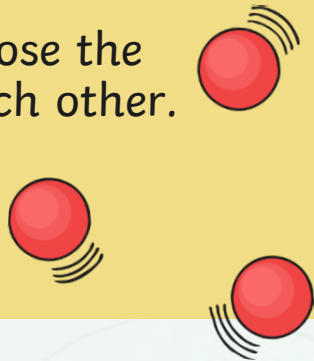
**Hint**



Solid

**Hint**

Think about how close the molecules are to each other.



Liquid



twinkl